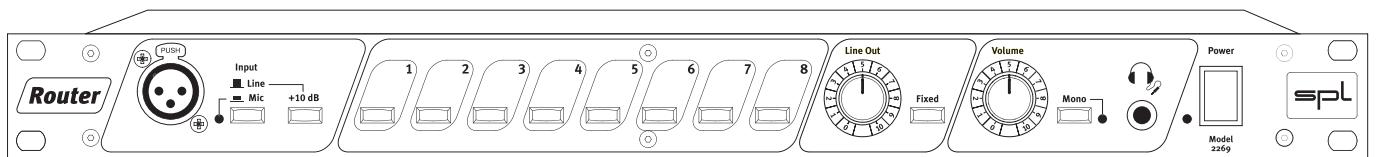


Owner's Manual



SPL Router

Model 2269

8 Channel Stereo Router

Version 1.1 – 3/2003

R&D: Ruben Tilgner

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In no event will SPL be liable for any damages, including loss of data, lost profits, cost of cover or other special, incidental, consequential or indirect damages arising from the use of the unit, however caused and on any theory of liability. This limitation will apply even if SPL or an authorized dealer has been advised of the possibility of such damage.

As with all SPL products, the SPL Router is conceived, designed and hand-built in Germany.

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Introduction

The SPL Router is a flexible switchbox suited for a wide variety of applications. With it, you can easily route a stereo signal to eight stereo outputs, or eight stereo signals to one stereo output. Switching is fully balanced using high quality switches, and all inputs and outputs are balanced, ensuring professional audio quality.

Additional features include:

- Up to +10 dB of preamplification for input signals
- Onboard headphone amp with mono switch in the output section for comfortable direct monitoring of the selected signal
- Line output with level control allows direct connection of active speakers. A switchable FIXED mode is provided for insert applications, which routes the selected signal 1:1 to the output.

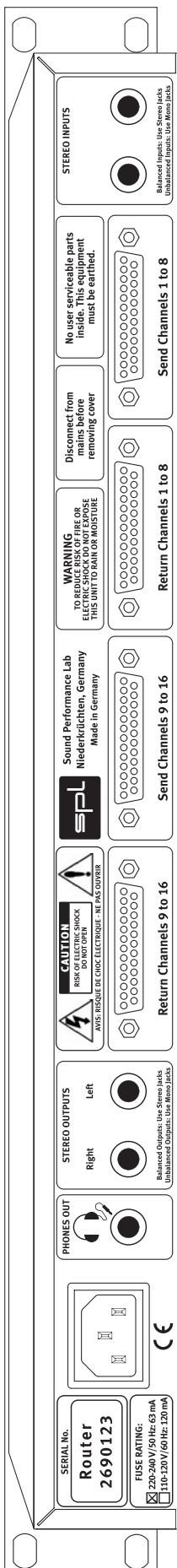
Hookup and Security Advices

Carefully select a place for setting up the SPL Router. The unit should be situated away from heat sources and direct sunlight. Avoid installation in environments exposed to vibrations, dust, heat, cold or moisture. Keep the unit away from transformers or motors or any other unit that could generate large variations in power supply or cause electrical interferences. Do not install the unit in proximity to power amplifiers or digital processors. You may consider placing it in a rack containing other analog gear. Such placement can prevent interference from Word Clock, SmpTE, MIDI, etc.

- Do not open the case. You may risk electric shock and may damage your equipment.
- Leave repairs and maintenance to a qualified service technician. Should foreign objects fall inside the case, contact your authorized dealer or support person.
- To avoid electric shock or fire hazards do not expose your unit to rain or dampness.
- In case of lightning unplug the unit. Please unplug the cable by pulling on the plug only; never pull on the cable.
- Never force a switch or knob.
- To clean the case use a lint-free cloth. Avoid cleaning agents as they may damage the chassis. Manufactured in standard 19“ EIA format, it utilises two rack units.
- Please support the back of the unit whenever it is being mounted into a 19 inch rack (especially important when touring).



Rear Panel/Connections



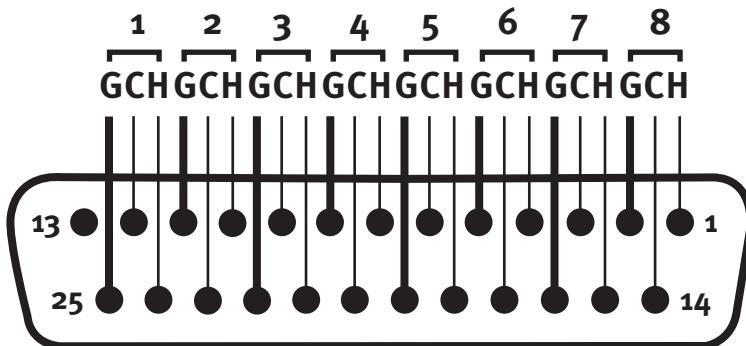
STEREO INPUTS

For connection of the source signal, which will be routed to the eight outputs. Use 1/4" TRS (stereo) plugs for balanced connections and 1/4" TS (mono) plugs for unbalanced signals. Maximum input level is +19 dBu.

SEND CHANNELS 1 TO 8

These connectors provide the balanced SEND signals from stereo channels 1 to 4 for connection to processor inputs. A send channel will only carry the input signal if the corresponding switch is activated. Standard adapter cables are readily available for these connections (Sub-D → XLR male or female or Sub-D → 1/4").

The Sub-D connectors are wired according to the Tascam standard:



G = GROUND, C=COLD (-), H=HOT (+)

The numbers on the cables correspond to the Router send channels as follows:

Cable No.	Send Channel	Switch Position
1	Send 1 Left	1
2	Send 1 Right	
3	Send 2 Left	2
4	Send 2 Right	
5	Send 3 Left	3
6	Send 3 Right	
7	Send 4 Left	4
8	Send 4 Right	

Example: if switch 1 is activated, the left side of the stereo signal is present at cable no. 1 and the right side at cable no. 2. Switch 2 routes the stereo signal to cables 3 and 4 and so on.

RETURN CHANNELS 1 TO 4

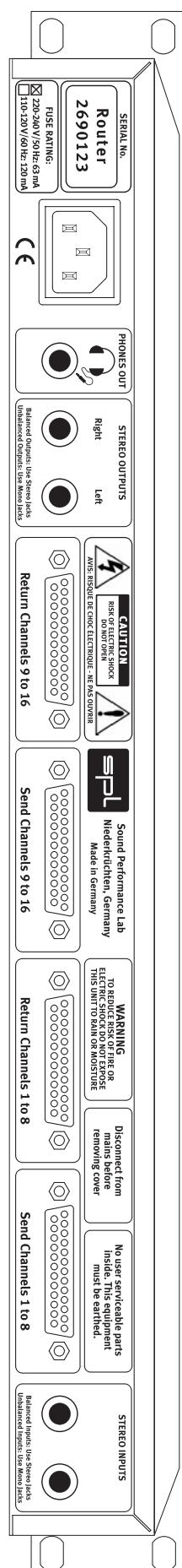
These connectors provide the balanced RETURN signal from stereo channels 1 to 4 for connection to processor outputs. These signals are routed to the headphone amp and the line out according to the switch positions. Once again, the connectors are wired according to the Tascam standard. The numbers on the cables correspond to the Router return channels as follows:

Cable No.	Return Channel	Switch Position
1	Return 1 Left	{ 1
2	Return 1 Right	
3	Return 2 Left	{ 2
4	Return 2 Right	
5	Return 3 Left	{ 3
6	Return 3 Right	
7	Return 4 Left	{ 4
8	Return 4 Right	

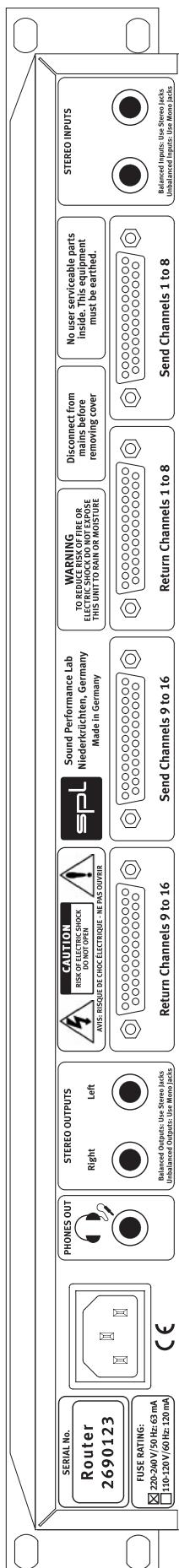
SEND CHANNELS 9 TO 16

These connectors provide the balanced SEND signal from stereo channels 5 to 8 for connection to processor inputs. The numbers on the cables correspond to the Router send channels as follows:

Cable No.	Send Channel	Switch Position
1	Send 5 Left	{ 5
2	Send 5 Right	
3	Send 6 Left	{ 6
4	Send 6 Right	
5	Send 7 Left	{ 7
6	Send 7 Right	
7	Send 8 Left	{ 8
8	Send 8 Right	



Rear Panel/Connections



RETURN CHANNELS 5 TO 8

These connectors provide the balanced RETURN signal from stereo channels 5 to 8 for connection to processor outputs. The numbers on the cables correspond to the Router channels as follows:

Cable No.	Return Channel	Switch Position
1	Return 5 Left	{ 5
2	Return 5 Right	
3	Return 6 Left	{ 6
4	Return 6 Right	
5	Return 7 Left	{ 7
6	Return 7 Right	
7	Return 8 Left	{ 8
8	Return 8 Right	

STEREO OUTPUTS

These connectors provide the balanced return signal from channels 1 to 8 according to the switch positions for connection of active speakers or other monitoring systems. The level is controlled by the LINE OUT pot. If FIXED mode is activated (switch depressed), the return signals are passed 1:1 to the STEREO OUTPUTS.

PHONES OUT

This stereo connector provides the same signal as the front-panel headphones output. Its level is also controlled by the VOLUME pot on the front panel. You can connect two headphones at a time (see page 8, PHONES OUT).

AC

For connection of the Router to AC power using the included power cord.

MIC INPUT

This connector allows you to connect a microphone and route it to eight external devices. One possible application would be easy comparison of up to eight mic preamps or other external processors with a single microphone. A condenser microphone may be used, although switching noises may occur due to phantom power. In this case, we recommend that you reduce the output volume before switching.

LINE/MIC Switch

This switch allows you to easily select between two connected sources. With the switch depressed (LED illuminates), the microphone input signal is routed to the outputs.

NOTE: The microphone signal is only routed to the left channels; right channels will still carry the line signal (if present). Always use the left channel (odd adapter cable numbers) when connecting to the inputs of various mic preamps or other external processors. The external equipment's outputs may be connected to either left or right channels. The MONO switch on the Router should be activated so that the microphone signal is heard on both channels.

Switches „1“ bis „8“

These switches route the input signal to the corresponding sends, e.g. external devices. A switch must be activated in order for the corresponding device to receive the signal.

+10 dB

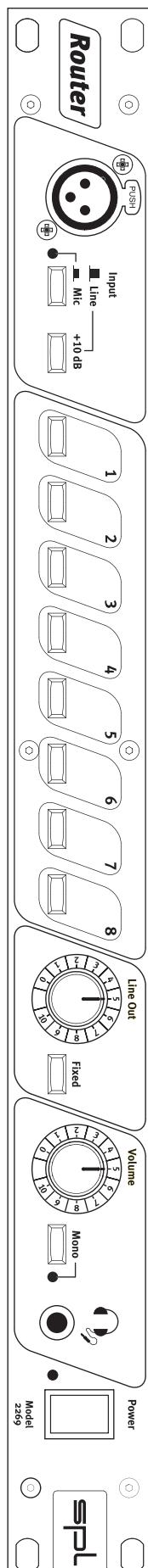
This switch allows you to increase the Router's input level by 10 dB. This is often necessary when using commercial CD players or similar devices with low output levels in conjunction with professional audio equipment.

LINE OUT

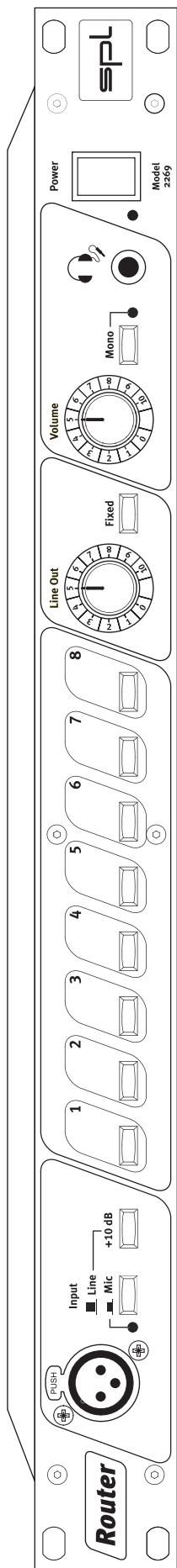
This pot controls the output level at the STEREO OUTPUTS. If for example active speakers are connected to these outputs, the volume can be controlled via the LINE OUT pot.

FIXED

This switch routes the return signal 1:1 to the STEREO OUTPUTS, bypassing the LINE OUT level control. The Router should always be in FIXED mode when used to switch between various insert devices.



Front Panel



VOLUME

This pot controls the level of the front- and rear-panel headphone outputs.

MONO

This switch converts the signal at the headphone and line outputs into a mono signal. The MONO switch should be activated when mono processors are connected or when microphones are used as a signal source (see above).

With the MONO function, it is also very easy to check for mono compatibility of stereo effects.

PHONES OUT

This connector allows you to connect standard stereo headphones. When using two sets of headphones (via the front- and rear-panel connectors), both sets should ideally have the same impedance. Otherwise, they could vary greatly in volume.

POWER-Schalter

You guessed it: this switch turns the Router on and off. The LED illuminates when power is on.

Selection of processors at the master insert of a console

By connecting the Router to a console's master insert you can connect up to eight various processors for easy comparison/selection, eliminating time-consuming patching and re-patching.

Connect the console's master insert sends to the Router's STEREO INPUTS, and the Router's STEREO OUTPUTS to the console's master insert returns. Select LINE on the front-panel INPUT switch. The +10 dB switch should be deactivated and FIXED mode activated so that the Router does not affect levels. Now the units can be connected to the router for comparison.

Expanded source switching in connection with a console

The Router can easily expand your console's source inputs, allowing you to monitor up to eight additional stereo sources. Simply connect your additional sources (CD, DAT, TV, Video etc.) to the Router's RETURN CHANNELS, and its STEREO OUTPUTS to your console's master input. The Router should be in FIXED mode. You can also directly monitor your sources via the Router's headphones outputs.

Speaker selection

The Router can also select and/or compare various speaker systems. Connect your stereo signal (e.g. console main outs) to the Router's STEREO INPUTS and your amplifiers or active speakers to the SEND CHANNELS. The INPUT switch should be set to LINE and the +10 dB switch deactivated.

Signal processor comparison/selection

The Router is an excellent tool for comparison and demonstration of various signal processors (equalizers, compressors, reverb or multieffects units) in a retail setting. Simply connect a CD player to the STEREO INPUTS, the SEND connectors to the processors' inputs and the processors' outputs to the RETURN CHANNELS. The INPUT switch should be set to LINE and the +10 dB switch activated if necessary. Depending on the situation, the various processors can be compared via headphones (PHONES OUTs) or active speakers (STEREO OUTPUTS). Use the LINE OUT pot to control the volume (FIXED mode must be deactivated).

Mic preamp comparison/selection

Similarly, the Router can be used for comparison and/or selection of various preamps. Connect a microphone to the MIC INPUT and set the INPUT switch accordingly. Connect the left SEND channels to the mic preamps' inputs and their outputs to either side of the Router's RETURN channels. Activate the MONO switch. For accurate comparison, be sure that all preamps are set to equal levels. If you are using a condenser mic, you will need to activate phantom power.

NOTE: Switching noises may occur due to phantom power. We recommend that you reduce the output volume before switching when using condenser microphones.

Technical Specifications

STEREO INPUTS/SEND connectors

Maximum input level:	+19 dBu
Input impedance:	10 kOhms
CCMR (1 kHz):	>70 dB
Maximum output level:	+20 dBu
THD+N (+10 dBu):	>105 dB
Noise:	-98.2 dBu
Noise (+10 dB):	-89.5 dBu
Freq. response (-0.5 dB):	10 Hz-80 kHz

STEREO OUTPUTS/RETURN connectors

Maximum input level:	+19 dBu
Input impedance:	10 kOhms
CCMR (1 kHz):	>70 dB
Maximum output level:	+19 dBu
THD+N (+10 dBu):	>100 dB
THD+N (Fixed):	>112 dB
Noise:	-98.2 dBu
Freq. response (-0.5 dB):	10 Hz-80 kHz

PHONES OUT

Output impedance:	0.2 Ohms
Maximum output voltage:	50 Ohms: 3.57 Veff 150 Ohms: 5.74 Veff 300 Ohms: 6.73 Veff 600 Ohms: 7.11 Veff
THD+N (150 Ohms, 4 Veff):	>95 dB
Power consumption:	7 W
Housing/measures:	Standard EIA 19 inch housing, 1 U 44 x 480 x 112 mm (H x B x T)
Weight:	2 kg

Technical specifications subject to change without notice.

SPL electronics GmbH (hereafter called SPL) products are warranted only in the country where purchased, through the authorized SPL distributor in that country, against defects in material or workmanship. The specific period of this limited warranty shall be that which is described to the original retail purchaser by the authorized SPL dealer or distributor at the time of purchase.

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- 3) in products repaired or serviced by other than authorized SPL repair facilities, or
- 4) in products with removed or defaced serial numbers, or 5) in components or parts or products expressly warranted by another manufacturer.

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This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state, country to country.

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Owner's Manual SPL Router, Model 2269



All you need is imagination, good ears and three letters: